

REMARKS/ARGUMENTS

The Office Action mailed July 12, 2006 has been reviewed and carefully considered. Claims 1, 3-6, 8-21, 23, 29, and 30 are pending in this application, with claims 1 and 6 being the only independent claims. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claim Amendments

Independent claim 1 is amended and now recites the further step of "illuminating, in response to said step of triggering, the measurement object with a measurement light pulse from a flash exposure unit during a predetermined time period in a defined manner".

Independent claim 6 is similarly amended to include the limitation of "a flash exposure unit for illuminating the measurement object with a measurement light pulse during a predetermined time period of a printing process in a defined manner".

Support for these limitations is found at page 9 line 14 to page 10 line 2 of the original disclosure.

I.Rejection of Claims under 35 U.S.C. § 103

Claims 1, 2-4, 6 and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,108,436 (Jansen) in view of U.S. Patent No. 6,108,436 (Hern).

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Jansen in view of Hern and U.S. Patent No. 5,363,174 (Magde).

Claims 8-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jansen in view of Hern and U.S. Patent No. 6,061,144 (Mamizuka).

Claims 10-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jansen in view of Hern, Mamizuka and U.S. Patent No. 5,856,876 (Sasanuma).

Claims 17-21 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jansen in view of Hern, Mamizuka and U.S. Patent No. 5,289,000 (Toyofuku).

Claim 30 is rejected under 35 U.S.C. §103(a) as being unpatentable over Jansen in view of Hern, and Toyofuku.

Independent claim 1 is amended and now includes the additional step of “illuminating, in response to said step of triggering, the measurement object with a measurement light pulse from a flash exposure unit during a predetermined time period in a defined manner”. As stated in the specification (page 9 lines 14 to page 10 line 2), the flash exposure unit serves to improve the measurement accuracy by illuminating the measurement object sufficiently and in a defined manner. The defined illumination of the measurement object with the measurement light pulse and the scanning action of the sensor take place simultaneously and are both controlled and triggered by the control unit.

It is respectfully submitted that independent claim 1 is allowable over the prior art of record because none of the prior art references, alone or in combination, disclose, teach or suggest “illuminating, in response to said step of triggering, the measurement object with a measurement light pulse from a flash exposure unit during a predetermined time period in a defined manner” and “scanning, in response to said step of triggering, the at least one measurement object with at least one sensor during the predetermined time period”.

As discussed in the previous correspondence, Jansen is directed to a system for controlling registration of the different colors of a multicolor print. According to Jansen, a plurality of marks 21-26 are printed on a printing material and an image recording means 14 such as a digital or CCD camera 36 monitors the location of the colors (see col. 4, lines 36-44, of Jansen). An illumination supply unit 15 supplies voltage to halogen lamps 45 when the printing

press starts to rotate (see col. 4, line 65 to col. 5, line 4). Jansen at least fails to disclose “illuminating, in response to said step of triggering, the measurement object with a measurement light pulse from a flash exposure unit during a predetermined time period in a defined manner”, because Jansen discloses the illumination unit 15 is responsive to a rotation of the printing press. Since the lamps are on continuously when the printing press is rotating, there is no need for turning the lamps on in response to a detection of a reference object. Furthermore, Jansen discloses that the lamps are halogen lamps which are very strong to eliminate influences of outside light (see col. 4, lines 57-67 of Jansen). In such a configuration, there is no motivation for turning the lamps on in response to detection of a reference object. Simultaneous scanning during this predetermined time period that the lights are on is also not disclosed by Jansen.

As also discussed before, Hern discloses a device for presetting a cut-off register in a folder of a web-fed printing press. A marking device 10 is arranged in front of the first printing unit and applies marks 9 onto side regions of the web (see col. 4, lines 16-19 of Hern). The marks permit the webs 6 to be fed into folder 5 in precise web-to-web register (col. 4, lines 19-21). A detector 13 detects when a gap or channel 12 in the blanket cylinder passes the detector, which causes marking device 10 to apply the mark (col. 4, lines 35-41). According to an embodiment, the gap is detected indirectly using an angle encoder or detector 20 (col. 6, lines 3-16; and Fig. 7). Since Hern discloses only that the marking device 10 is activated in response to the detector 13, Hern also at least fails to teach or suggest “illuminating, in response to said step of triggering, the measurement object with a measurement light pulse from a flash exposure unit during a predetermined time period in a defined manner” and corresponding scanning during this predetermined time period.

In view of the above amendments and remarks, independent claim 1 is deemed to be allowable over Jansen in view of Hern.


Independent claim 6 is amended to include a limitation similar to the above limitation of independent claim 1 and is therefore deemed allowable for the same reasons as is independent claim 1.

Dependent claims 3-5, 8-21, 23, 29, and 30, each being dependent on one of independent claims 1 and 6, are allowable for the same reasons as are independent claims 1 and 6, as well as for the additional recitations contained therein.

In view of the above amendments and remarks, the application is deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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Dated: October 12, 2006